Bradley **Kohler**

MECHATRONICS ENGINEER · 1 YEAR OF WORK EXPERIENCE · 16 MONTHS OF CO-OP EXPERIENCE

Waterloo, ON, Canada

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Skills

My skills include but are not limited to:

- BASH, C/C++, Python and Java
- Microcontroller and Microprocessor firmware (MATLAB/Simulink, Labview, ARM Mbed, STM32, Nordic, Qualcomm Snapdragon)
- Embedded Operating Systems (Linux, mbedOS, ChibiOS, FreeRTOS)
- PCB hardware design (Verilog HDL, NI Multisim, Eagle)
- Systems design (Maplesim, AutoCAD, SolidWorks)
- Mathematics (Maple18, NumPy, Eigen, MATLAB)

Work Experience

Northern Digital Inc. *Waterloo, Ontario*

ADVANCED RESEARCHER & FIRMWARE DEVELOPER *May 2018 - Sept. 2019*

- Utilized problem-solving skills and successfully implemented data fusion algorithms on 3D guidance systems.
- Using creative skills, authored new data fusion algorithms for 3D guidance systems achieving NASA level TRL4.
- Initiated the development of Python libraries for sensor data fusion visualization and statistical analysis.
- Worked collaboratively with a team to develop a C/C++ simulator for 3D inertial data.
- Demonstrated adaptability by reworking/porting platform specific C/C++ libraries to other ARM platforms.
- Responsible for professional presentations to team members, broader research and development leaders demonstrating confidence.

McMaster University *Hamilton, Ontario*

ADVANCED RESEARCHER & TEACHING ASSISTANT *May - Dec. 2015 & May - Sept. 2017*

- Demonstrated computer skills by developing embedded C/C++ software for safety critical systems.
- Exercised good organization skills by creating software documentation for system design.
- Took on addition responsibility by preparing lessons for students and presentations for laboratories.
- Friendly/outgoing to students especially when addressing their questions/concerns.

Emnor Mechanical Inc. *Hamilton, Ontario*

SOFTWARE DEVELOPER & MECHANICAL REPAIRMAN & SHOP EMPLOYEE *May - Sept. 2015 & May - Sept. 2016*

- Demonstrated good organization skills by developing an inventory management software for the company warehouse.
- Consistently applied attention to detail in managing company payroll, invoices and purchase orders.
- Implemented technology skills by reverse engineering damaged parts and producing CAD drawings using the Faro Arm.
- Demonstrated a strong work ethic by disassembling, repairing and reassembling centrifugal pumps.

Education

McMaster University *Hamilton, Ontario*

MECHATRONICS ENGINEERING CO-OP *Expected Graduation April 2020*

- McMaster Cumulative Grade Point Average 3.5/4.0
- McMaster Engineering Co-op Student of the Year Nominee

Projects

Bottlenose *Waterloo, Ontario*

DEVELOPER *May 2020 - May 2021*

- Developed neural network models to run on the cameras.
- Developed complex state estimation solutions for object tracking.

Atraxa *Waterloo, Ontario*

DEVELOPER *January - Sept. 2019*

- Developed the embedded firmware including the drivers, structure and build system for the virtual reality hand remotes.
- Solved complex firmware anomalies with low-level programming knowledge.

Retina *Hamilton, Ontario*

DEVELOPER *Sept. 2019 - April 2020*

- Developed Ultra-Wide Band indoor naigation system for the visually impaired.
- Developed backend services for indoor routing and GeoCoding services.